

The Health Alert Network in Action

Public health's national early warning and response network proved its worth on September 11.

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On September 11, 2001, within hours of the terrorist attacks in New York City and Washington, D.C., the Centers for Disease Control and Prevention (CDC) issued a health alert to public health authorities in all 50 states. The alert, sent by e-mail and fax, recommended that they heighten surveillance for any unusual disease occurrence or increased numbers of illnesses that might be associated with the attacks. CDC accomplished this nationwide notification by using its Health Alert Network (HAN). States received the notification in an average of six minutes. Twenty-four states then used their own statewide Health Alert Networks to quickly forward the alert to local public health officials; in Washington State, the alert was forwarded to local officials within one minute of its transmission by CDC. State and local health officials subsequently broadcasted information to hospitals, emergency departments, urgent care facilities, community health nurses, hospital and private laboratories, infection control practitioners, law enforcement agencies, and water suppliers.

The Health Alert Network program was born in October 1998, when public health officials from state and local public health agencies and professional associations met with CDC officials in Atlanta to define the vision for a health alert program: a communication, information, and training system supporting an early warning and response network against bioterrorism and other health threats. The program would focus explicitly on building preparedness and response capacity at the *local* health department level, in partnership with colleagues at the state health departments. The group defined a set of core components and capacities for the HAN program in the areas of information content, skills and essential competencies, communications and connectivity, and critical tools (e.g., for preparedness assessment).

Three HAN goals

The group chose three fundamental technical capacities as development goals during phase one of the Health Alert Network program.

1. Ensure **robust electronic communications capacity** at all full-function local health jurisdictions in the country. (A full-function local health jurisdiction is a jurisdiction performing most or all of the essential public health services. For deploying HAN technologies, CDC encouraged applicants to consider grouping smaller, less-than-full-function local public health agencies into regional nodes.) The communications capacity was to include, at a minimum, high-speed, continuous Internet connectivity supporting electronic mail and Web browsing, as well as training and support in the use and maintenance of these technologies at the local level (*for the full specifications, see www.phppo.cdc.gov/han/Documents/IT/ArchStandards.pdf*).

2. Ensure capacity at every local health jurisdiction to **receive distance-learning offerings** from CDC, schools of public health, and others, with at least one accessible, generally available satellite downlink site within one hour's drive of all full-function local health jurisdictions. When the HAN program was launched, CDC anticipated that satellite-based training would remain important for at least five to ten years (and possibly much longer), although it also anticipated that Internet-based distance-learning resources would be of increasing breadth and value.

3. Ensure a comprehensive capacity across all levels of the public health system to **receive and broadcast urgent health alerts**. At the local health jurisdiction level, this meant the capacity to receive health alerts from the state health department and from CDC and to broadcast health alerts to key recipients in their communities (e.g., hospital emergency departments, fire safety and emergency medical systems). In most states, health alert broadcast capacity was developed using (at a minimum) broadcast fax technologies with sufficient staff and funding to maintain contact lists.

Progress to date

CDC now provides HAN funding and technical assistance to all 50 states, the District

State	Local Jurisdictions/HAN Nodes	High-speed Internet connectivity	Capacity to send Health Alerts
Alaska	26	35%	38%
Idaho	7	100%	100%
Montana	52	71%	46%
Oregon	34	97%	100%
Washington	34	97%	100%
Wyoming	23	100%	100%

Table 1. HAN status of Northwest states (Sources: CDC survey of HAN coordinators, Oct. 2001; Montana State DPHHS/QIO survey of Montana Local Health Jurisdictions, March, 2002)

of Columbia, three large metropolitan areas (Los Angeles, New York City, and Chicago), and the territory of Guam to ensure comprehensive deployment of the three core technical capacities. In addition, HAN has supported several special projects that augment the national program. Three local health jurisdictions—DeKalb County Board of Health, GA; Monroe County Health Department, NY; and Denver Public Health Department/Denver Health, CO—were funded to develop HAN “exemplar” sites to serve as models and national learning laboratories in the areas of integrated communications and information systems, advanced operational readiness assessment, and comprehensive bioterrorism preparedness training. These sites are now part of CDC’s Centers for Public Health Preparedness program (*for information regarding the health department-based Centers’ accomplishments and lessons learned, see www.naccho.org/general397.cfm*). The HAN program has also supported the development and delivery of informatics training to ensure that public health leaders can effectively manage new information technology projects supported by HAN. On-line information resources and systems have also been developed at CDC to provide critical bioterrorism preparedness and response information (www.bt.cdc.gov), and to ensure capacity to broadcast national health alerts from CDC to public health partners nationwide.

Great progress has been made in developing the three technical capacities envisioned for phase one of HAN. Based on a survey of the 50 state HAN coordinators, high-speed, continuous Internet connectivity is now available in all local health jurisdictions in 23 states; it is available in more than 75 percent of the local health jurisdictions in 35 states. Similarly, the capacity to broadcast and receive urgent health alerts is in place in all local health jurisdictions in 23 states; it is in place in more than 75 percent of the local health jurisdictions in 30 states (*see table 1 for the status of the six Northwest states*). Similar progress is being made, in collaboration with state-based distance-learning coordinators, to ensure access to distance-learning resources by staff in local public health agencies across the country.

Health officials have made wide use of the capacities of the Health Alert Network, although the most dramatic use of the HAN was in response to the events of September 2001. Because of the subsequent bioterrorist attacks involving anthrax, the recipient base for transmission of CDC health alerts expanded dramatically in the ensuing months. By the end of December 2001, HAN messages were being directly distributed to approximately 25,000 recipients. Though still not fully deployed, the Health Alert Network clearly met a critical national need during the crises of last fall. It is important to complete this first phase of the HAN preparedness program to ensure that all communities are protected by health departments that have the fundamental information technology capacities envisioned for the Health Alert Network. 🐾

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Resources

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The Montana Health Alert Network

James Aspevig

The Montana State Department of Public Health and Human Services works with 50 independent county health departments. Their independence, coupled with population-based funding disparities, makes a recommendation by the state that county health departments adopt an expensive/proprietary communications technology both politically and financially untenable. As a result, HAN implementation in Montana is based on three principles: sustainability, multiple-use, and leveraging the Internet-based component of the HAN architecture to promote partnerships with other public and private organizations.

Sustainability is supported by recommending applications that transform local agencies’ Internet connections into a crucial element of their day-to-day work. A second factor supporting sustainability is affordability. This usually requires negotiations between the HAN coordinator and each county government to ensure that the county can afford to assume the costs of the proposed type of connection should federal funding be reduced.

The principles of multiple-use and of leveraging public/private partnerships are best illustrated by the array of Web-based projects currently being developed or deployed by the Department. These Internet-based projects include an integrated statewide Immunization Registry, two Maternal and Child Health Data Systems, and an HIV/AIDS project management system to evaluate and provide reimbursement to private and public contractors. We also anticipate adopting CDC’s NEDSS platform as widely as possible. As Montana’s physical infrastructure expands, our HAN and distance-learning coordinators are working together to develop a technology-training curriculum, emphasizing the basic skills of immediate utility to public health practitioners.

Montana HAN’s reliance on the Internet as the backbone for communication, principally through e-mail, provides a unique opportunity to upgrade the business efficiency of county health departments while developing a multipurpose infrastructure that will support the delivery of Web-based client management systems, distance learning, and communications. 🐾

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